

## U.C. HONORS ACADEMY MEMBERS

AT ITS EIGHTY-SEVENTH ANNUAL COMMENCEMENT in Berkeley, June 16, the University of California conferred its highest honor, the degree of Doctor of Laws, on two members of the California Academy of Sciences. They are Ernest Brown Babcock, professor emeritus of genetics at Berkeley, and Duncan McDuffie, Berkeley realtor, an honorary vice-president of the Sierra Club, who is noted for his support of conservation.

### DO YOU SPELUNK?

IF YOU DO, the National Speleological Society (headquarters, 510 Star Building, Washington, D.C.) wants you to join a Grotto (local club). All you will need thereafter is a miner's headlamp, plus a taste for darkest corners of the earth. You may, if you wish, get a nerveless taste test right now in North American Hall, where we are currently showing a series of photographs (a road show of the above Society) depicting spelunkers at work in such famous annexes of the Underworld as the Shenandoah, Wyandotte, Mystic, and other caves and caverns from the Appalachians to the Southwest.

"The world is full of caves," says the Society's brochure. "Only a few have been explored. All need scientific study."

Whether or not you shudder at the mere thought of swimming Stygian pools, crawling through keyholes from one black chamber into the unknown mysteries of another, threading your way through tunnels that may have no end short of Hades, and all the other excitements open to the Compleat Spelunker—you will enjoy this series of photographs, many of which are in color. Besides the assorted stalactites, stalagmites, and other weird formations usually associated with our better caves, you will see also the resident life of them—the fruit bat, cave rat, cricket, crayfish, salamander. You will see spelunkers spelunking for isopods in what looks like a king-size inkwell. And you will see, as we did with a slight chill, the last one down the exhibit hall, a ghostly white stalagmite rather suggestively named "The Finger of God."

### APPLICATIONS FOR MEMBERSHIP

NOTICE is hereby given to all Corporate Members that the Council has approved the applications of Mr. Benning Peyton Cook, Miss Esther L. Larson, Mrs. William G. Merchant, Miss Cherry Ann Clark, and Dr. Lester M. Field for MEMBERSHIP in the California Academy of Sciences. If no objection to the election of these applicants be received at the office of the Academy within two weeks after July 10, they will be considered elected.

# ACADEMY NEWS LETTER

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*Photographed by J. Wyatt Durham*

### TRAVEL IN COLOMBIA

Geologist Bernie Colley demonstrates  
how it is done, by land.

*(See page 2)*

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## *July Announcement*

THE REGULAR JULY MEETING of the California Academy of Sciences will be held in North American Hall, West Wing of the Academy buildings in Golden Gate Park, on Wednesday evening, July 12, 1950, at 8:30 o'clock. Dr. J. Wyatt Durham of the University of California will give an illustrated talk entitled

### A GEOLOGIST'S TRAVELS IN COLOMBIA AND VENEZUELA

Look at a physical-political map of South America. In the northwest corner, between the Caribbean and Pacific coastal lowlands and the vast interior lowlands of the Amazon-Orinoco basin, lie the cordilleras of the northern Andes.

Entering Colombia from the south, the Andes—momentarily fallen from the grandeur of Ecuadorean Chimborazo, Cotopaxi, Cayambe, and their giant sister volcanoes—nearly break, and fork three ways. The Cordillera Occidental curves northwestward towards the Isthmus of Panama; the Cordillera Central points north between Río Cauca and Río Magdalena and dies on the marshy plain where its two confining rivers meet, south of Cartagena and Baranquilla. But the Cordillera Oriental is determined to reach the sea. Carrying Bogotá on its back, it parts Colombia equally in two before it in turn divides at the Venezuelan border, its two arms enclosing the basin of Lake Maracaibo and the Gulf of Venezuela. Its western arm thrusts north along the border and drops off seaward. Ending actually on the Guajira Peninsula, it appears to turn sharply westward towards Baranquilla and to stop spectacularly with the Sierra Nevada de Santa Marta, whose 18,000-foot mass all but rises from the sea. The other arm bends eastward to Caracas, Venezuela's capital, and plunges steeply into the Caribbean (hard to drown, it comes up for air on Trinidad Island, and again, for the last continental gasp, on tiny Tobago Island, where the Atlantic begins).

In Colombia, as in countries to the south, the Andes set the modes of travel. Recounting his journeys from one part to another, the traveler, geologist or not, must make the cordilleras leading actors in his drama. Through the centuries, they have stoutly resisted the development of road networks. For instance, when Dr. J. Wyatt Durham, chief paleontologist and stratigrapher for the Tropical Oil Company, moved from his 1943 headquarters in Baranquilla south to Bogotá, over 400 air miles, he could walk, get a horse, take a boat, or fly. He flew, of course, but twenty years earlier he would have taken a boat up the Río Magdalena. Instead of three

hours in the air, his journey might have been six days or more of hard going against high water; coming back could have taken a month or two if meanwhile the river had fallen low enough to ground the boat on some sand bar. A motor "highway" connecting the capital with the Caribbean port was opened in 1946, just as Dr. Durham completed his four years in Colombia and Venezuela.

Slow boat, foot, or fast plane, after air transport began in the twenties, were the travel choices between coast and interior, except for a railroad connecting the Pacific seaport of Buenaventura with the Cauca valley, beyond the western cordillera, and its cities—Popayán, Cali, Manizales, Medellín. Another rail system links Bogotá, where Dr. Durham headquartered during his last three years in Colombia, with its neighboring cities of the eastern cordillera and upper Río Magdalena valley. But when he went down into the Amazon basin to the southeast, Dr. Durham traveled by mule and canoe. Foot trails and rivers are the only roads in more than half the country.

Dr. Durham's account is not all travel—there are things along the way and at the end of each road. There is the fossil plesiosaur, a marine reptile he helped dig out of the central Andean plateau some 7,500 feet above present sea level. There are Maracaibo and Caracas, and the Indians of the Guajira Peninsula—the men wear shirts; if caught with trousers on they suffer the direst social consequences (the women wear Mother Hubbards). There are the grainfields above Pasto at 12,000 feet and the lush jungles down river to the east. And Dr. Durham, who is recording secretary of the Academy as well as associate professor of paleontology and curator of invertebrates in the Museum of Paleontology, University of California, Berkeley, recorded in his Kodachromes and notebooks many other interesting and strange facts in this land of contrasts.

The public is cordially invited.

### A.A.A.S. PACIFIC DIVISION MEETS IN SALT LAKE CITY

THE ACADEMY was well represented at the thirty-first annual meeting of the Pacific Division of the American Association for the Advancement of Science. The Western scientists in convocation were guests this year of the University of Utah, from June 19 to June 24.

The Academy's librarian, Dr. Charles H. Danforth, was elected president of the Pacific Division, succeeding Dr. Laurence M. Klauber of the Zoological Society of San Diego. Our director, Dr. Robert C. Miller, was reelected secretary-treasurer. Others of the Academy's official family attending were the executive secretary, Mrs. Vashti F. Hawley; Dr. E. B. Babcock, first vice-president; Dr. George S. Myers, second vice-president; Dr. Earl S. Herald, curator of aquatic biology; and Dr. W. I. Follett, curator of ichthyology.

Delegates enjoyed a visit to the Bingham Copper Mine and Great Salt Lake, besides an organ recital in the famous Salt Lake Tabernacle. Scientific highlight of the meeting was a symposium on "The Westward Migration and its Consequences," which dealt with "the increasing shift of population to the western United States, and its effect on agriculture and water resources."